



## SUBSTITUTE SEQUENCE LISTING

<110> Du, Chunying  
Yang, Qiheng  
<120> Compositions and Methods for Cleaving IAPs  
<130> 40716(IP-022)  
<160> 87  
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ctttctgatc gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctctccgga	660
atcagtgggt cccagcggcg ctacattggg gtgatgatgc tgaccctgag tcccagcatc	720
cttgctgaac tacagcttcg agaaccaagc tttcccgatg ttcagcatgg tgtactcatc	780

cataaagtca tcctgggctc ccctgcacac cgggctggtc tgcggcctgg tgatgtgatt	840
ttggccattg gggagcagat ggtacaaaat gctgaagatg tttatgaagc tgttcgaacc	900
caatcccagt tggcagtgc gatccggcgg ggacgagaaa cactgacctt atatgtgacc	960
cctgaggtca cagaa	975

<210> 13  
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 <213> Homo sapiens

<220>  
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 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
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 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <223> n = a, t, g, c

<220>  
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 <223> n = t, g

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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc tttgcactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaacagn gagggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgac gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctcctccgga	660
atcagtgggt cccagcggcg ctacattggg gtgatgatgc tgaccctgag tcccagcatc	720

cttgcctgaac tacagcttcg agaaccaagc tttcccgatg ttcagcatgg tgtactcatc	780
cataaagtca tcctgggctc ccctgcacac cgggctggtc tgcggcctgg tgatgtgatt	840
ttggccattg gggagcagat ggtacaaaat gctgaagatg tttatgaagc tgttcgaacc	900
caatcccagt tggcagtgca gatccggcgg ggacgagaaa cactgacctt atatgtgacc	960
cctgaggtca cagaa	975

<210> 14  
 <211> 663  
 <212> DNA  
 <213> Homo sapiens

<400> 14 ccgccgccccg cttctccccg gagtcagtac aacttcatcg cagatgtggt ggagaagaca	60
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cctatctcga acggctcagg attcgtggtg gctgccgatg ggctcattgt caccaacgcc	180
catgtggtgg ctgatcggcg cagagtccgt gtgagactgc taagcggcga cacgtatgag	240
gccgtggtca cagctgtgga tcccgtggca gacatcgcaa cgctgaggat tcagactaag	300
gagcctctcc ccacgtgcc tctgggacgc tcagctgatg tccggcaagg ggagtttggt	360
gttgccatgg gaagtccctt tgcactgcag aacacgatca catccggcat tgtagctct	420
gctcagcgtc cagccagaga cctgggactc ccccaaacca atgtggaata cattcaaact	480
gatgcagcta ttgattttgg aaactctgga ggtcccctgg ttaacctgga tggggaggtg	540
attggagtga acaccatgaa ggtcacagct ggaatctcct ttgccatccc ttctgatcgt	600
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cag	663

<210> 15  
 <211> 675  
 <212> DNA  
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<220>  
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 <223> n = Any Nucleotide or Absent

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 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature

<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (519)..(519)  
<223> n = a, t, g, c

<400> 15  
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctctccgga 660  
atcagtgggt cccag 675

<210> 16  
<211> 675  
<212> DNA  
<213> Homo sapiens

<220>  
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<223> n = Any Nucleotide or Absent

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<222> (193)..(193)  
<223> n = t, c

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<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
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<223> n=a, t, g, c

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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt      180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc      240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg      300
attcagacta aggagcctct cccacgctg cctctggggac gctcagctga tgtccggcaa      360
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc      420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa      480
tacattcaaa ctgatgcagc tattgatttt ggaaacagng gaggtcccct ggtaacctg      540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc      600
ccttctgatc gtcttcgaga gtttctgcat cgtggggaaa agaagaattc ctcctccgga      660
atcagtgggt cccag                                                                675

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<210> 17
<211> 636
<212> DNA
<213> Homo sapiens

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<400> 17
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gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg      120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt      180
gtcaccaacg cccatgtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc      240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagacatcgc aacgctgagg      300
attcagacta aggagcctct cccacgctg cctctggggac gctcagctga tgtccggcaa      360
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc      420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa      480
tacattcaaa ctgatgcagc tattgatttt ggaaactctg gaggtcccct ggtaacctg      540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc      600
ccttctgatc gtcttcgaga gtttctgcat cgtggg                                           636

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<210> 18
<211> 636
<212> DNA
<213> Homo sapiens

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<220>
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<222> (193)..(193)
<223> n = t, c

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<220>  
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<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
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<223> n = a, t, g, c

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gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

<210> 19  
<211> 636  
<212> DNA  
<213> Homo sapiens

<220>  
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<223> n = t, c

<220>  
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<222> (195)..(195)  
<223> n = t, c

<220>  
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<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
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<223> n = a, t, g, c

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<400> 19
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccnangtggt ggctgacgga cgcagagtcc gtgtgagact gctaagcggc 240
gacacgtatg agggcgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360
ggggagtttg ttgttgccat ggaagtccc tttgactgc agaacacgat cacatccggc 420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa 480
tacattcaaa ctgatgcagc tattgatttt ggaacagng gaggtcccct ggttaacctg 540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

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<210> 20
<211> 636
<212> DNA
<213> Homo sapiens

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<220>
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<222> (194)..(194)
<223> n = t, g, c

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<220>
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<222> (195)..(195)
<223> n = a, t, g, c

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<220>
<221> misc_feature
<222> (284)..(284)
<223> n = t, g, c

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<220>
<221> misc_feature
<222> (285)..(285)
<223> n = a, t, g, c

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<220>
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<223> n = a, t, g, c

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<400> 20
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180
gtcaccaacg ccgnngtggt ggctgacgga cgcagagtcc gtgtgagact gctaagcggc 240

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gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagnnatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc tttgcaactgc agaacacgat cacatccggc	420
attgtttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 21  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
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 <222> (193)..(195)  
 <223> n = a, t, g, c

<220>  
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 <222> (283)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (517)..(517)  
 <223> n = g, c

<220>  
 <221> misc\_feature  
 <222> (518)..(519)  
 <223> n = a, t, g, c

<400> 21	
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gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnnngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cannnatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc tttgcaactgc agaacacgat cacatccggc	420
attgtttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaacnng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 22  
 <211> 624  
 <212> DNA  
 <213> Homo sapiens

<400> 22  
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 cctatctcga acggctcagg attcgtggtg gctgccgatg ggctcattgt caccaacgcc 180  
 catgtggtgg ctgatcggcg cagagtccgt gtgagactgc taagcggcga cacgtatgag 240  
 gccgtggtca cagctgtgga tcccgtggca gacatcgaa cgctgaggat tcagactaag 300  
 gagcctctcc ccacgtgcc tctgggacgc tcagctgatg tccggcaagg ggagtttggt 360  
 gttgccatgg gaagtccctt tgcactgcag aacacgatca catccggcat tgtagctct 420  
 gctcagcgtc cagccagaga cctgggactc ccccaaacca atgtggaata cattcaaact 480  
 gatgcagcta ttgattttgg aaactctgga ggtcccctgg ttaacctgga tggggagggtg 540  
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<210> 23  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
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 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
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 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacggt cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat ggggaagtccc tttgactgc agaacacgat cacatccggc	420
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tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgac gtcttcgaga gtttctgcat cgtggg	636

<210> 24  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
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 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
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 <222> (193)..(193)  
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<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
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 <223> n = a, t, g, c

<400> 24 nnnnnnnnnn nncgcgcgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacggt cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat ggggaagtccc tttgactgc agaacacgat cacatccggc	420

attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaacagng gaggtcccct ggtaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 25  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<400> 25	
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ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg cccatgtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagacatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaggtccc ttgactgc agaacacgat cacatccggc	420
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tacattcaaa ctgatgcagc tattgatttt ggaaactctg gaggtcccct ggtaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat	630

<210> 26  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
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 <222> (193)..(193)  
 <223> n = t, c

<220>  
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 <222> (195)..(195)  
 <223> n = t, c

<220>  
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 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 26

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gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacggt cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat ggggaagtccc tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgacg gtcttcgaga gtttctgcat	630

<210> 27  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n=a, t, g, c

<400> 27	
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacggt cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat ggggaagtccc tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa	480

tacattcaaa ctgatgcagc tattgatttt ggaaacagng gaggtcccct ggттаacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat	630

<210> 28  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (194)..(194)  
 <223> n = t, g, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (284)..(284)  
 <223> n = t, g, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 28	
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccgnngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cagnnatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggттаacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat	630

<210> 29  
 <211> 630

<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (193)..(195)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (283)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (517)..(517)  
<223> n = g, c

<220>  
<221> misc\_feature  
<222> (518)..(519)  
<223> n = a, t, g, c

<400> 29  
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgagagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
gtcaccaacg ccnnngtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg cannnatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaacnnng gaggtcccct ggttaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat 630

<210> 30  
<211> 636  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (160)..(162)  
<223> n = Deleted Nucleic Acids

<220>  
<221> misc\_feature  
<222> (193)..(193)  
<223> n = t, c

<220>

<221> misc\_feature  
<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (519)..(519)  
<223> n = a, t, g, c

<400> 30  
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgcgagg tccctatctc gaacggctca ggattcgtgn nngctgccga tgggctcatt 180  
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

<210> 31  
<211> 636  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (193)..(193)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (229)..(231)  
<223> n = Deleted Nucleic Acids

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>



<221> misc\_feature  
<222> (519)..(519)  
<223> n = a, t, g, c

<400> 31  
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
gtcaccaacg ccnangtggt ggctgacgg cgcagagtcc gtgtgagann nctaagcggc 240  
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat gggaagtccc ttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat cgtggg 636

<210> 32  
<211> 636  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (193)..(193)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (370)..(372)  
<223> n = Deleted Nucleic Acids

<220>  
<221> misc\_feature  
<222> (519)..(519)  
<223> n = t, g

<400> 32  
gccgtcccta gcccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180

gtcaccaacg ccnangtggt ggctgacg	cgagagtc	gtgtgagact	gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg	gatcccgtg	caganatcgc	aacgctgagg	300
attcagacta aggagcctct cccacgctg	cctctgggac	gctcagctga	tgtccggcaa	360
ggggagtttn nngttgccat gggaagtccc	tttgactgc	agaacacgat	cacatccggc	420
attgttagct ctgctcagcg tccagccaga	gacctgggac	tccccaaac	caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt	ggaaacagng	gaggtcccct	ggttaacctg	540
gatggggagg tgattggagt gaacaccatg	aaggtcacag	ctggaatctc	ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat	cgtggg			636

<210> 33  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (530)..(532)  
 <223> n = Deleted Nucleic Acids

<400> 33		
gccgtcccta gcccgccgcc cgcttctccc	cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat	atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca	ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgacg	cgagagtc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg	gatcccgtg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg	cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc	tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga	gacctgggac tccccaaac caatgtggaa	480

tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccn nnttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 34  
 <211> 618  
 <212> DNA  
 <213> Homo sapiens

<400> 34	
ccgccgccg cttctccccg gagtcagtac aacttcacg cagatgtggt ggagaagaca	60
gcacctgccg tgggtctatat cgagatcctg gaccggcacc ctttcttggg ccgcgaggtc	120
cctatctcga acggctcagg attcgtggtg gctgccgatg ggctcattgt caccaacgcc	180
catgtggtgg ctgatcggcg cagagtccgt gtgagactgc taagcggcga cacgtatgag	240
gccgtggtca cagctgtgga tcccgtggca gacatcgaa cgctgaggat tcagactaag	300
gagcctctcc ccacgtgcc tctgggacgc tcagctgatg tccggcaagg ggagtttggt	360
gttgccatgg gaagtccctt tgcactgcag aacacgatca catccggcat tgtagctct	420
gctcagcgtc cagccagaga cctgggactc ccccaaacca atgtggaata cattcaaact	480
gatgcagcta ttgattttgg aaactctgga ggtcccctgg ttaacctgga tggggagggtg	540
attggagtga acaccatgaa ggtcacagct ggaatctcct ttgccatccc ttctgatcgt	600
cttcgagagt ttctgcat	618

<210> 35  
 <211> 630  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature

<222> (519)..(519)  
<223> n = a, t, g, c

<400> 35  
nnnnnnnnnn nnccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60  
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg 120  
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt 180  
gtcaccaacg ccnangtggg ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc 240  
gacacgtatg aggccgtggg cacagctgtg gatcccgtgg caganatcgc aacgctgagg 300  
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa 360  
ggggagtttg ttgttgccat ggggaagtccc ttgactgc agaacacgat cacatccggc 420  
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa 480  
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggtaaacctg 540  
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc 600  
ccttctgatc gtcttcgaga gtttctgcat 630

<210> 36  
<211> 636  
<212> DNA  
<213> Homo sapiens

<220>  
<221> misc\_feature  
<222> (1)..(12)  
<223> n = Any Nucleotide or Absent

<220>  
<221> misc\_feature  
<222> (160)..(162)  
<223> n = Deleted Nucleic Acids

<220>  
<221> misc\_feature  
<222> (193)..(193)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (195)..(195)  
<223> n = t, c

<220>  
<221> misc\_feature  
<222> (285)..(285)  
<223> n = a, t, g, c

<220>  
<221> misc\_feature  
<222> (519)..(519)  
<223> n = a, t, g, c

<400> 36  
nnnnnnnnnn nnccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg 60

gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgn nngctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc ttgtcactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 37  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (229)..(231)  
 <223> n = Deleted Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 37	
nnnnnnnnnn nnccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180

gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagann nctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360
ggggagtttg ttgttgccat gggaagtccc tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 38  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (370)..(372)  
 <223> n = Deleted Nucleic Acids

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<400> 38 nnnnnnnnnn nnccgccgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
gacacgtatg aggccgtggt cacagctgtg gatcccgtgg caganatcgc aacgctgagg	300
attcagacta aggagcctct cccacgctg cctctgggac gctcagctga tgtccggcaa	360

ggggagtttn nngttgccat ggggaagtccc tttgactgc agaacacgat cacatccggc	420
attgttagct ctgctcagcg tccagccaga gacctgggac tcccccaaac caatgtggaa	480
tacattcaaa ctgatgcagc tattgatttt ggaaactcng gaggtcccct ggttaacctg	540
gatggggagg tgattggagt gaacaccatg aaggtcacag ctggaatctc ctttgccatc	600
ccttctgatc gtcttcgaga gtttctgcat cgtggg	636

<210> 39  
 <211> 636  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> misc\_feature  
 <222> (1)..(12)  
 <223> n = Any Nucleotide or Absent

<220>  
 <221> misc\_feature  
 <222> (193)..(193)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (195)..(195)  
 <223> n = t, c

<220>  
 <221> misc\_feature  
 <222> (285)..(285)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (519)..(519)  
 <223> n = a, t, g, c

<220>  
 <221> misc\_feature  
 <222> (530)..(532)  
 <223> n = Deleted Nucleic Acids

<400> 39 nnnnnnnnnn nncgcgcgcc cgcttctccc cggagtcagt acaacttcat cgcagatgtg	60
gtggagaaga cagcacctgc cgtggtctat atcgagatcc tggaccggca ccctttcttg	120
ggccgcgagg tccctatctc gaacggctca ggattcgtgg tggctgccga tgggctcatt	180
gtcaccaacg ccnangtggt ggctgatcgg cgcagagtcc gtgtgagact gctaagcggc	240
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cagatggtac aaaatgctga agatgtttat gaagctgttc gaaccaatc ccagttggca	240
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<400> 41	
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<210> 42  
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 <212> DNA  
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<400> 42	
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tggtaaaaat cttagttcat gtgaagaaat ttcattgtga tgtttttagct atcaaacagc	180
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aaaaaaaaa	2589

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<211> 2589

<212> DNA  
<213> Homo sapiens

<400> 43  
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aaaaaaaaa	2589

<210> 44  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<400> 44

Ala	Val	Pro	Ser	Pro	Pro	Pro	Ala	Ser	Pro	Arg	Ser	Gln	Tyr	Asn	Phe
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Ile	Ala	Asp	Val	Val	Glu	Lys	Thr	Ala	Pro	Ala	Val	Val	Tyr	Ile	Glu
			20					25					30		

Ile	Leu	Asp	Arg	His	Pro	Phe	Leu	Gly	Arg	Glu	Val	Pro	Ile	Ser	Asn
		35					40					45			

Gly	Ser	Gly	Phe	Val	Val	Ala	Ala	Asp	Gly	Leu	Ile	Val	Thr	Asn	Ala
	50					55					60				

His	Val	Val	Ala	Asp	Arg	Arg	Arg	Val	Arg	Val	Arg	Leu	Leu	Ser	Gly
65					70					75					80

Asp	Thr	Tyr	Glu	Ala	Val	Val	Thr	Ala	Val	Asp	Pro	Val	Ala	Asp	Ile
				85					90					95	

Ala	Thr	Leu	Arg	Ile	Gln	Thr	Lys	Glu	Pro	Leu	Pro	Thr	Leu	Pro	Leu
			100					105					110		

Gly	Arg	Ser	Ala	Asp	Val	Arg	Gln	Gly	Glu	Phe	Val	Val	Ala	Met	Gly
		115					120					125			

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
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Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
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Pro Glu Val Thr Glu  
325

<210> 45  
<211> 325  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 45

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
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Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
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Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser

210

215

220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
 225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
 245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
 260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
 275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
 290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
 305 310 315 320

Pro Glu Val Thr Glu  
 325

<210> 46  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <222> (65)..(65)  
 <223> Xaa = Ala, Asp, Asn, Cys, Glu, Gln, Gly, Ile, Leu, Met, Pro, Ser,  
 Thr, Val

<220>  
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 <223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 46

Ala Val Pro Ser Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
 305 310 315 320

Pro Glu Val Thr Glu  
 325

<210> 47  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <222> (65)..(65)  
 <223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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 Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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 Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 47

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125



Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
305 310 315 320

Pro Glu Val Thr Glu  
325

<210> 48  
<211> 225  
<212> PRT  
<213> Homo sapiens

<400> 48

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30  
 Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45  
 Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60  
 His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80  
 Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
 85 90 95  
 Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110  
 Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125  
 Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140  
 Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160  
 Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
 165 170 175  
 Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190  
 Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
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 Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
 210 215 220

Gln  
 225

<210> 49  
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 <212> PRT  
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<220>  
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 <222> (65)..(65)

<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>

<221> MISC\_FEATURE

<222> (95)..(95)

<223> Xaa = Asp, Glu, Lys, His, Arg

<220>

<221> MISC\_FEATURE

<222> (173)..(173)

<223> Xaa = Ser

<400> 49

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
 210 215 220

Gln  
 225

<210> 50  
 <211> 225  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <222> (65)..(65)  
 <223> Xaa = Ala, Asp, Asn, Cys, Glu, Gly, Ile, Leu, Met, Pro, Ser, Thr, Val

<220>  
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<220>  
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 <223> Xaa = Ser

<400> 50

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

<210> 51  
<211> 225  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 51

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

<210> 52  
<211> 321  
<212> PRT  
<213> Homo sapiens

<400> 52

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
1 5 10 15

Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
20 25 30

His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe

35

40

45

Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
50 55 60

Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
65 70 75 80

Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
85 90 95

Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
100 105 110

Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
115 120 125

Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
130 135 140

Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
145 150 155 160

Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
165 170 175

Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190

Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His Arg Gly  
195 200 205

Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser Gln Arg Arg Tyr  
210 215 220

Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile Leu Ala Glu Leu  
225 230 235 240

Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His Gly Val Leu Ile  
245 250 255

His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala Gly Leu Arg Pro  
260 265 270

Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val Gln Asn Ala Glu  
275 280 285

Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu Ala Val Gln Ile  
290 295 300

Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr Pro Glu Val Thr  
 305 310 315 320

Glu

<210> 53  
 <211> 325  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(4)  
 <223> Xaa = Any Amino Acid or Absent

<220>  
 <221> MISC\_FEATURE  
 <222> (65)..(65)  
 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 53

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110



Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile  
225 230 235 240

Leu Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His  
245 250 255

Gly Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala  
260 265 270

Gly Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val  
275 280 285

Gln Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu  
290 295 300

Ala Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr  
305 310 315 320

Pro Glu Val Thr Glu  
325

<210> 54  
<211> 221  
<212> PRT  
<213> Homo sapiens

<400> 54

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val



<220>  
 <221> MISC\_FEATURE  
 <222> (65)..(65)  
 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 55

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly Glu Lys Lys Asn Ser Ser Ser Gly Ile Ser Gly Ser  
210 215 220

Gln  
225

<210> 56  
<211> 212  
<212> PRT  
<213> Homo sapiens

<400> 56

Ala Val Pro Ser Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val

180

185

190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly  
 210

<210> 57  
 <211> 212  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (65)..(65)  
 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
 <221> MISC\_FEATURE  
 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 57

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 58  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Asp, Asn, Cys, Glu, Gln, Gly, Ile, Leu, Met, Pro, Ser,  
Thr, Val

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 58

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 59  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 59

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 60  
<211> 208  
<212> PRT  
<213> Homo sapiens

<400> 60

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val



1	5	10	15
Val Glu Lys	Thr Ala Pro Ala Val	Val Tyr Ile Glu Ile	Leu Asp Arg
	20	25	30
His Pro Phe	Leu Gly Arg Glu Val	Pro Ile Ser Asn Gly	Ser Gly Phe
	35	40	45
Val Val Ala Ala Asp Gly	Leu Ile Val Thr Asn Ala	His Val Val Ala	
	50	55	60
Asp Arg Arg Arg Val	Arg Val Arg Leu Leu	Ser Gly Asp Thr Tyr	Glu
	65	70	75 80
Ala Val Val Thr	Ala Val Asp Pro Val	Ala Asp Ile Ala Thr	Leu Arg
	85	90	95
Ile Gln Thr	Lys Glu Pro Leu Pro	Thr Leu Pro Leu Gly	Arg Ser Ala
	100	105	110
Asp Val Arg	Gln Gly Glu Phe Val	Val Ala Met Gly	Ser Pro Phe Ala
	115	120	125
Leu Gln Asn Thr Ile Thr	Ser Gly Ile Val Ser	Ser Ala Gln Arg Pro	
	130	135	140
Ala Arg Asp Leu Gly	Leu Pro Gln Thr Asn	Val Glu Tyr Ile Gln	Thr
	145	150	155 160
Asp Ala Ala Ile	Asp Phe Gly Asn Ser	Gly Gly Pro Leu Val	Asn Leu
	165	170	175
Asp Gly Glu Val	Ile Gly Val Asn Thr	Met Lys Val Thr	Ala Gly Ile
	180	185	190
Ser Phe Ala Ile Pro Ser Asp	Arg Leu Arg Glu Phe	Leu His Arg Gly	
	195	200	205

<210> 61  
 <211> 212  
 <212> PRT  
 <213> Homo sapiens

<220>  
 <221> MISC\_FEATURE  
 <222> (1)..(4)  
 <223> Xaa = Any Amino Acid or Absent

<220>  
 <221> MISC\_FEATURE  
 <222> (65)..(65)

<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>

<221> MISC\_FEATURE

<222> (95)..(95)

<223> Xaa = Asp, Glu, Lys, His, Arg

<220>

<221> MISC\_FEATURE

<222> (173)..(173)

<223> Xaa = Ser

<400> 61

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 62  
<211> 210  
<212> PRT  
<213> Homo sapiens

<400> 62

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

His Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His

210

<210> 63  
<211> 210  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 63

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His  
210

<210> 64  
<211> 210  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Asp, Asn, Cys, Glu, Gln, Gly, Ile, Leu, Met, Pro, Ser,  
Thr, Val

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 64

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His  
210

<210> 65  
<211> 210  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Ser, Thr, Val, Trp, Tyr

<220>  
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<222> (173)..(173)  
<223> Xaa = Ala, Cys, Asp, Glu, Phe, Gly, His, Ile, Lys, Leu, Met, Asn,  
Pro, Gln, Arg, Thr, Val, Trp, Tyr, Asx, Glx

<400> 65

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
           35                          40                          45  
 Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
       50                          55                          60  
 Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
   65                          70                          75                          80  
 Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
                           85                          90                          95  
 Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
                          100                         105                         110  
 Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
          115                         120                         125  
 Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
      130                         135                         140  
 Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
   145                         150                         155                         160  
 Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
                          165                         170                         175  
 Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
          180                         185                         190  
 Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
          195                         200                         205  
 Leu His  
      210

<210> 66  
 <211> 212  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <223> Xaa = Deleted Amino Acid

<220>  
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 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
 <221> MISC\_FEATURE  
 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 66

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Xaa Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
 195 200 205

Leu His Arg Gly



<210> 67  
 <211> 212  
 <212> PRT  
 <213> Homo sapiens

<220>  
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 <222> (65)..(65)  
 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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 <223> Xaa = Deleted Amino Acid

<220>  
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 <222> (95)..(95)  
 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 67

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Xaa Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 68  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = Ala, Asp, Asn, Cys, Glu, Gln, Gly, Ile, Leu, Met, Pro, Ser,  
Thr, Val

<220>  
<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Ala, Gly, Ile, Leu, Met, Phe, Pro, Ser, Trp, Tyr, Val

<220>  
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<222> (124)..(124)  
<223> Xaa = Deleted Amino Acid

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 68

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Xaa Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 69  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
<221> MISC\_FEATURE  
<222> (65)..(65)  
<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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<222> (95)..(95)  
<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<220>  
<221> MISC\_FEATURE

<222> (177)..(177)  
<223> Xaa = Deleted Amino Acid

<400> 69

Ala Val Pro Ser Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Xaa Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 70  
<211> 206  
<212> PRT  
<213> Homo sapiens

<400> 70

Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe Ile Ala Asp Val  
1 5 10 15  
Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu Ile Leu Asp Arg  
20 25 30  
His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn Gly Ser Gly Phe  
35 40 45  
Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala His Val Val Ala  
50 55 60  
Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly Asp Thr Tyr Glu  
65 70 75 80  
Ala Val Val Thr Ala Val Asp Pro Val Ala Asp Ile Ala Thr Leu Arg  
85 90 95  
Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu Gly Arg Ser Ala  
100 105 110  
Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly Ser Pro Phe Ala  
115 120 125  
Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser Ala Gln Arg Pro  
130 135 140  
Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu Tyr Ile Gln Thr  
145 150 155 160  
Asp Ala Ala Ile Asp Phe Gly Asn Ser Gly Gly Pro Leu Val Asn Leu  
165 170 175  
Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val Thr Ala Gly Ile  
180 185 190  
Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe Leu His  
195 200 205

<210> 71

<211> 210

<212> PRT

<213> Homo sapiens

<220>

<221> MISC\_FEATURE

<222> (1)..(4)

<223> Xaa = Any Amino Acid or Absent

<220>  
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 <223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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 <223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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 <222> (173)..(173)  
 <223> Xaa = Ser

<400> 71

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
 1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
 20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
 35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
 50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
 65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
 85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
 100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
 115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
 130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
 145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
 165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
 180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His  
210

<210> 72  
<211> 212  
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<220>  
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<222> (1)..(4)  
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<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

<220>  
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<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 72

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Xaa Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 73  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
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<223> Xaa = Any Amino Acid or Absent

<220>  
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<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<400> 73



Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Xaa Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 74  
<211> 212  
<212> PRT  
<213> Homo sapiens

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<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
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<223> Xaa = Deleted Amino Acid

<220>  
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<222> (173)..(173)  
<223> Xaa = Ser

<400> 74

Xaa Xaa Xaa Xaa Pro Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Xaa Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Leu Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 75  
<211> 212  
<212> PRT  
<213> Homo sapiens

<220>  
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<222> (1)..(4)  
<223> Xaa = Any Amino Acid or Absent

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<222> (65)..(65)  
<223> Xaa = His, Lys, Arg, Phe, Tyr, Trp

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<221> MISC\_FEATURE  
<222> (95)..(95)  
<223> Xaa = Asp, Glu, Lys, His, Arg

<220>  
<221> MISC\_FEATURE  
<222> (173)..(173)  
<223> Xaa = Ser

<220>  
<221> MISC\_FEATURE  
<222> (177)..(177)  
<223> Xaa = Deleted Amino Acid

<400> 75

Xaa Xaa Xaa Xaa Pro Pro Ala Ser Pro Arg Ser Gln Tyr Asn Phe  
1 5 10 15

Ile Ala Asp Val Val Glu Lys Thr Ala Pro Ala Val Val Tyr Ile Glu  
20 25 30

Ile Leu Asp Arg His Pro Phe Leu Gly Arg Glu Val Pro Ile Ser Asn  
35 40 45

Gly Ser Gly Phe Val Val Ala Ala Asp Gly Leu Ile Val Thr Asn Ala  
50 55 60

Xaa Val Val Ala Asp Arg Arg Arg Val Arg Val Arg Leu Leu Ser Gly  
65 70 75 80

Asp Thr Tyr Glu Ala Val Val Thr Ala Val Asp Pro Val Ala Xaa Ile  
85 90 95

Ala Thr Leu Arg Ile Gln Thr Lys Glu Pro Leu Pro Thr Leu Pro Leu  
100 105 110

Gly Arg Ser Ala Asp Val Arg Gln Gly Glu Phe Val Val Ala Met Gly  
115 120 125

Ser Pro Phe Ala Leu Gln Asn Thr Ile Thr Ser Gly Ile Val Ser Ser  
130 135 140

Ala Gln Arg Pro Ala Arg Asp Leu Gly Leu Pro Gln Thr Asn Val Glu  
145 150 155 160

Tyr Ile Gln Thr Asp Ala Ala Ile Asp Phe Gly Asn Xaa Gly Gly Pro  
165 170 175

Xaa Val Asn Leu Asp Gly Glu Val Ile Gly Val Asn Thr Met Lys Val  
180 185 190

Thr Ala Gly Ile Ser Phe Ala Ile Pro Ser Asp Arg Leu Arg Glu Phe  
195 200 205

Leu His Arg Gly  
210

<210> 76  
<211> 100  
<212> PRT  
<213> Homo sapiens

<400> 76

Arg Arg Tyr Ile Gly Val Met Met Leu Thr Leu Ser Pro Ser Ile Leu  
1 5 10 15

Ala Glu Leu Gln Leu Arg Glu Pro Ser Phe Pro Asp Val Gln His Gly  
20 25 30

Val Leu Ile His Lys Val Ile Leu Gly Ser Pro Ala His Arg Ala Gly  
35 40 45

Leu Arg Pro Gly Asp Val Ile Leu Ala Ile Gly Glu Gln Met Val Gln  
50 55 60

Asn Ala Glu Asp Val Tyr Glu Ala Val Arg Thr Gln Ser Gln Leu Ala  
65 70 75 80

Val Gln Ile Arg Arg Gly Arg Glu Thr Leu Thr Leu Tyr Val Thr Pro  
85 90 95

Glu Val Thr Glu  
100

<210> 77  
<211> 4  
<212> PRT  
<213> Homo sapiens

<400> 77

Ala Val Pro Ser  
1

<210> 78  
<211> 618  
<212> PRT  
<213> Homo sapiens

<400> 78

Met His Lys Thr Ala Ser Gln Arg Leu Phe Pro Gly Pro Ser Tyr Gln  
1 5 10 15

Asn Ile Lys Ser Ile Met Glu Asp Ser Thr Ile Leu Ser Asp Trp Thr  
20 25 30

Asn Ser Asn Lys Gln Lys Met Lys Tyr Asp Phe Ser Cys Glu Leu Tyr  
35 40 45

Arg Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu  
50 55 60

Arg Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys  
65 70 75 80

Val Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Leu Gly  
85 90 95

Asp Ser Pro Ile Gln Lys His Lys Gln Leu Tyr Pro Ser Cys Ser Phe  
100 105 110

Ile Gln Asn Leu Val Ser Ala Ser Leu Gly Ser Thr Ser Lys Asn Thr  
115 120 125

Ser Pro Met Arg Asn Ser Phe Ala His Ser Leu Ser Pro Thr Leu Glu  
130 135 140

His Ser Ser Leu Phe Ser Gly Ser Tyr Ser Ser Leu Ser Pro Asn Pro

145		150		155		160									
Leu	Asn	Ser	Arg	Ala 165	Val	Glu	Asp	Ile	Ser 170	Ser	Ser	Arg	Thr	Asn 175	Pro
Tyr	Ser	Tyr	Ala 180	Met	Ser	Thr	Glu	Glu 185	Ala	Arg	Phe	Leu	Thr 190	Tyr	His
Met	Trp	Pro 195	Leu	Thr	Phe	Leu	Ser 200	Pro	Ser	Glu	Leu	Ala 205	Arg	Ala	Gly
Phe	Tyr 210	Tyr	Ile	Gly	Pro	Gly 215	Asp	Arg	Val	Ala	Cys 220	Phe	Ala	Cys	Gly
Gly 225	Lys	Leu	Ser	Asn	Trp 230	Glu	Pro	Lys	Asp	Asp 235	Ala	Met	Ser	Glu	His 240
Arg	Arg	His	Phe	Pro 245	Asn	Cys	Pro	Phe	Leu 250	Glu	Asn	Ser	Leu	Glu 255	Thr
Leu	Arg	Phe	Ser 260	Ile	Ser	Asn	Leu	Ser 265	Met	Gln	Thr	His	Ala 270	Ala	Arg
Met	Arg	Thr 275	Phe	Met	Tyr	Trp	Pro 280	Ser	Ser	Val	Pro	Val 285	Gln	Pro	Glu
Gln	Leu 290	Ala	Ser	Ala	Gly	Phe 295	Tyr	Tyr	Val	Gly	Arg 300	Asn	Asp	Asp	Val
Lys 305	Cys	Phe	Cys	Cys	Asp 310	Gly	Gly	Leu	Arg	Cys 315	Trp	Glu	Ser	Gly	Asp 320
Asp	Pro	Trp	Val	Glu 325	His	Ala	Lys	Trp	Phe 330	Pro	Arg	Cys	Glu	Phe 335	Leu
Ile	Arg	Met	Lys 340	Gly	Gln	Glu	Phe	Val 345	Asp	Glu	Ile	Gln	Gly 350	Arg	Tyr
Pro	His	Leu 355	Leu	Glu	Gln	Leu	Leu 360	Ser	Thr	Ser	Asp	Thr 365	Thr	Gly	Glu
Glu	Asn 370	Ala	Asp	Pro	Pro	Ile 375	Ile	His	Phe	Gly	Pro 380	Gly	Glu	Ser	Ser
Ser 385	Glu	Asp	Ala	Val	Met 390	Met	Asn	Thr	Pro	Val 395	Val	Lys	Ser	Ala	Leu 400
Glu	Met	Gly	Phe	Asn 405	Arg	Asp	Leu	Val	Lys 410	Gln	Thr	Val	Gln	Ser 415	Lys

Ile Leu Thr Thr Gly Glu Asn Tyr Lys Thr Val Asn Asp Ile Val Ser  
420 425 430

Ala Leu Leu Asn Ala Glu Asp Glu Lys Arg Glu Glu Glu Lys Glu Lys  
435 440 445

Gln Ala Glu Glu Met Ala Ser Asp Asp Leu Ser Leu Ile Arg Lys Asn  
450 455 460

Arg Met Ala Leu Phe Gln Gln Leu Thr Cys Val Leu Pro Ile Leu Asp  
465 470 475 480

Asn Leu Leu Lys Ala Asn Val Ile Asn Lys Gln Glu His Asp Ile Ile  
485 490 495

Lys Gln Lys Thr Gln Ile Pro Leu Gln Ala Arg Glu Leu Ile Asp Thr  
500 505 510

Ile Leu Val Lys Gly Asn Ala Ala Ala Asn Ile Phe Lys Asn Cys Leu  
515 520 525

Lys Glu Ile Asp Ser Thr Leu Tyr Lys Asn Leu Phe Val Asp Lys Asn  
530 535 540

Met Lys Tyr Ile Pro Thr Glu Asp Val Ser Gly Leu Ser Leu Glu Glu  
545 550 555 560

Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys Met Asp  
565 570 575

Lys Glu Val Ser Val Val Phe Ile Pro Cys Gly His Leu Val Val Cys  
580 585 590

Gln Glu Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg Gly Ile  
595 600 605

Ile Lys Gly Thr Val Arg Thr Phe Leu Ser  
610 615

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<212> PRT  
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<400> 79

Met Asn Ile Val Glu Asn Ser Ile Phe Leu Ser Asn Leu Met Lys Ser  
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Ala Asn Thr Phe Glu Leu Lys Tyr Asp Leu Ser Cys Glu Leu Tyr Arg  
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Met Ser Thr Tyr Ser Thr Phe Pro Ala Gly Val Pro Val Ser Glu Arg  
35 40 45  
Ser Leu Ala Arg Ala Gly Phe Tyr Tyr Thr Gly Val Asn Asp Lys Val  
50 55 60  
Lys Cys Phe Cys Cys Gly Leu Met Leu Asp Asn Trp Lys Arg Gly Asp  
65 70 75 80  
Ser Pro Thr Glu Lys His Lys Lys Leu Tyr Pro Ser Cys Arg Phe Val  
85 90 95  
Gln Ser Leu Asn Ser Val Asn Asn Leu Glu Ala Thr Ser Gln Pro Thr  
100 105 110  
Phe Pro Ser Ser Val Thr Asn Ser Thr His Ser Leu Leu Pro Gly Thr  
115 120 125  
Glu Asn Ser Gly Tyr Phe Arg Gly Ser Tyr Ser Asn Ser Pro Ser Asn  
130 135 140  
Pro Val Asn Ser Arg Ala Asn Gln Asp Phe Ser Ala Leu Met Arg Ser  
145 150 155 160  
Ser Tyr His Cys Ala Met Asn Asn Glu Asn Ala Arg Leu Leu Thr Phe  
165 170 175  
Gln Thr Trp Pro Leu Thr Phe Leu Ser Pro Thr Asp Leu Ala Lys Ala  
180 185 190  
Gly Phe Tyr Tyr Ile Gly Pro Gly Asp Arg Val Ala Cys Phe Ala Cys  
195 200 205  
Gly Gly Lys Leu Ser Asn Trp Glu Pro Lys Asp Asn Ala Met Ser Glu  
210 215 220  
His Leu Arg His Phe Pro Lys Cys Pro Phe Ile Glu Asn Gln Leu Gln  
225 230 235 240  
Asp Thr Ser Arg Tyr Thr Val Ser Asn Leu Ser Met Gln Thr His Ala  
245 250 255  
Ala Arg Phe Lys Thr Phe Phe Asn Trp Pro Ser Ser Val Leu Val Asn  
260 265 270  
Pro Glu Gln Leu Ala Ser Ala Gly Phe Tyr Tyr Val Gly Asn Ser Asp



275					280					285					
Asp	Val	Lys	Cys	Phe	Cys	Cys	Asp	Gly	Gly	Leu	Arg	Cys	Trp	Glu	Ser
	290					295					300				
Gly	Asp	Asp	Pro	Trp	Val	Gln	His	Ala	Lys	Trp	Phe	Pro	Arg	Cys	Glu
305					310					315					320
Tyr	Leu	Ile	Arg	Ile	Lys	Gly	Gln	Glu	Phe	Ile	Arg	Gln	Val	Gln	Ala
				325					330					335	
Ser	Tyr	Pro	His	Leu	Leu	Glu	Gln	Leu	Leu	Ser	Thr	Ser	Asp	Ser	Pro
			340					345					350		
Gly	Asp	Glu	Asn	Ala	Glu	Ser	Ser	Ile	Ile	His	Phe	Glu	Pro	Gly	Glu
		355					360					365			
Asp	His	Ser	Glu	Asp	Ala	Ile	Met	Met	Asn	Thr	Pro	Val	Ile	Asn	Ala
	370					375					380				
Ala	Val	Glu	Met	Gly	Phe	Ser	Arg	Ser	Leu	Val	Lys	Gln	Thr	Val	Gln
385					390					395					400
Arg	Lys	Ile	Leu	Ala	Thr	Gly	Glu	Asn	Tyr	Arg	Leu	Val	Asn	Asp	Leu
				405					410					415	
Val	Leu	Asp	Leu	Leu	Asn	Ala	Glu	Asp	Glu	Ile	Arg	Glu	Glu	Glu	Arg
			420					425					430		
Glu	Arg	Ala	Thr	Glu	Glu	Lys	Glu	Ser	Asn	Asp	Leu	Leu	Leu	Ile	Arg
		435					440					445			
Lys	Asn	Arg	Met	Ala	Leu	Phe	Gln	His	Leu	Thr	Cys	Val	Ile	Pro	Ile
	450					455					460				
Leu	Asp	Ser	Leu	Leu	Thr	Ala	Gly	Ile	Ile	Asn	Glu	Gln	Glu	His	Asp
465					470					475					480
Val	Ile	Lys	Gln	Lys	Thr	Gln	Thr	Ser	Leu	Gln	Ala	Arg	Glu	Leu	Ile
				485					490					495	
Asp	Thr	Ile	Leu	Val	Lys	Gly	Asn	Ile	Ala	Ala	Thr	Val	Phe	Arg	Asn
			500					505					510		
Ser	Leu	Gln	Glu	Ala	Glu	Ala	Val	Leu	Tyr	Glu	His	Leu	Phe	Val	Gln
		515					520					525			
Gln	Asp	Ile	Lys	Tyr	Ile	Pro	Thr	Glu	Asp	Val	Ser	Asp	Leu	Pro	Val
	530					535					540				

Glu Glu Gln Leu Arg Arg Leu Gln Glu Glu Arg Thr Cys Lys Val Cys  
545 550 555 560

Met Asp Lys Glu Val Ser Ile Val Phe Ile Pro Cys Gly His Leu Val  
565 570 575

Val Cys Lys Asp Cys Ala Pro Ser Leu Arg Lys Cys Pro Ile Cys Arg  
580 585 590

Ser Thr Ile Lys Gly Thr Val Arg Thr Phe Leu Ser  
595 600

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<400> 80

Glu Gln Lys Leu Ile Ser Glu Glu Asp Leu  
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26

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<211> 61  
<212> DNA  
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<400> 82  
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60

c 61

<210> 83  
<211> 32  
<212> DNA  
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aatctagaat ggccgtccct agcccgccgc cc

32

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<400> 84

Ala Val Pro Ile  
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Ala Ser Gln Arg Leu Phe Pro Gly  
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Ser Phe Ala His Ser Leu Ser Pro  
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<400> 87

Asn Ser Arg Ala Val Glu Asp Ile  
1 5